

## **Claim**

What is claimed is:

1. A method for leak-testing a motor vehicle fuel tank and associated evaporative emissions control system, comprising:

the use of a pressure regulator system, comprised of orifices attached to a nitrogen or compressed air source, to deliver gas from such source at a specified pressure measured by a pressure transducer, to the evaporative emissions system of a gasoline-powered motor vehicle until the pressure of such system is approximately 14 inches of water (about .45 pounds per square inch) above atmospheric pressure;

the use of look-up tables to determine an appropriate pass-fail decision cutpoint, based on measured drop in tank pressure over a 120-second period, such tables incorporating the estimated liquid fuel temperature, and time of year (affecting fuel volatility) into the decision cutpoint;

the use of decision-tree logic to determine whether a vehicle has a leak sufficiently large that pressurization is impossible and the vehicle is deemed to fail the test;

the use of an electronic interface between the pressurization device and an on-line computer system which issues commands for the effective control of the pressurization device.